

Editorial

## Risk of Inguinal Hernia Formation after Radical Prostatectomy: A Consequence or Coincidence?

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### HIGHLIGHTS

- Some risk factors of inguinal hernia formation are described in the literature.
- It is not clear whether inguinal hernia formation after Radical Prostatectomy is its Consequence or Coincidence?
- The incidence of inguinal hernia following radical prostatectomy has been reported at 6-15%.

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### ABSTRACT

The post-operation complication is one of the causes of inguinal hernias, but the main aetiology of them is still unknown. One of the hypotheses for inguinal hernias is after radical prostatectomy. Inguinal hernia is one of the most common causes of surgery. There are several techniques to repair this problem. However, nowadays there are a variety of articles to explain laparoscopic repair. This disease could be divided into direct and indirect. Indirect hernias usually have a congenital aetiology by open process vaginalis. However direct hernias are from the inguinal canal's floor.

**Keywords:** Inguinal Hernia; Radical Prostatectomy; Process Vaginalis

**Editorial:** Inguinal hernia is one of the most common causes of surgery. There are several techniques to repair this problem. however, nowadays there are a variety of articles to explain laparoscopic repair. This disease could be divided into direct and indirect. Indirect hernias usually have a congenital aetiology by open process vaginalis. However, direct hernias are from the inguinal canal's floor.

The incidence of inguinal hernia following radical prostatectomy has been reported at 6-15%. Although the aetiology is unknown, some risk factors have been

described in the literature. They are laparoscopic operation controversy (1, 2), perineal surgery, mini-laparotomy, lymphadenectomy, age, low body mass index, subclinical inguinal hernia, previous hernia repair, and anastomosis stricture, which have been reported in a systematic review study (1). Although in this study the proportion of indirect hernia was around 90%, they didn't separate this group from a direct hernia in the final analysis (1).

With regards to direct inguinal hernia, some researchers mention that the low midline incision will

be aetiologic (3). But others, like Lodding et al., believe that the disruption of transversalis fascia would be a cause which was argued by others. Another hypothesis is the disruption to the posterior part of the rectus sheath which puts the linkage between Hesselbach and falx's inguinal ligaments into damage, which may weaken the internal ring (4). Lijia liu et al., have identified Retropubic Radical Prostatectomy (RRP) as a major cause of inguinal hernia, and older people, especially those over 80 years, are at risk for Postoperative Inguinal Hernia (PIH) (5). This theory could explain the similar incidences of post-operational inguinal hernia in open and laparoscopic radical prostatectomy with and without lymph node dissection.

On the other hand, some surgeons claim that the harmful effect of the operation on the internal inguinal ring would be the cause. Therefore, some surgical techniques were introduced to lower the incidence of hernia, such as prophylactic releasing of the spermatic cord from the peritoneum without dissection(1). However, the internal ring was not manipulated technically during radical prostatectomy. In open and laparoscopic retroperitoneal procedures peritoneum is not generally incised and in laparoscopic intraperitoneal operation, the peritoneum is usually incised near medial umbilical ligaments, further from the inguinal ring. So, one could argue that it couldn't be etiologic.

Some of the prostate cancers have lower urinary tract symptoms, especially straining as an obstructive symptom, which could predispose hernia formation. In indirect hernias, congenital pathology could be worsening because of the obstruction, not the operation. Thus, the hernia could be a coincidence, not the consequence of the operation. Some of these cases identify before and some after the operation. From our point of view, the patient's history of inguinal pain could help us identify these cases before operation and preoperational ultrasound could help us as well. If there is a consistent hernia, axillary procedures like pre-peritoneal repair during the open procedure and mesh insertion in laparoscopy and robotic-assisted operation could be helpful.

All things considered, the inguinal hernia after radical prostatectomy could be not only a complication but a coincidence as well. Pre-operational screening could help us decrease this incidence. Further studies with consideration of this screening could help us comprehend this problem.

### Conclusions

Despite different hypotheses, the main aetiology of inguinal hernia is still unknown and further studies are required. However, Inguinal hernias could be not only a post-operation complication but also a coincidence finding that screening modalities such as ultrasonography

could be used to pre-operationally diagnose them.

### Authors' contributions

AFY designed the study and edited the manuscript, RK wrote the manuscript.

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All authors claim that there is no competing interest.

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### Ethics statement

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### Data availability

Data will be provided on request.

### Abbreviations

PIH Postoperative inguinal hernia  
PRP Retropubic radical prostatectomy

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